

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) A vertical heat exchanger comprising:  
a pair of a first fluid passing ports for flowing through a tube;  
a pair of a second fluid passing ports for flowing through a shell; and  
a vent pipe at least part of one end of which being made of an upper tube sheet part and the other end of which connected outside the heat exchanger to an immediately adjacent second fluid passing port passing the same fluid as the vent pipe; ~~and /or~~  
a drain pipe at least part of one end of which being made of a lower tube sheet part and the other end of which connected outside the heat exchanger to an immediately adjacent second fluid passing port passing the same fluid as the drain pipe.
5. (Original) A heat exchanger according to claim 1, wherein the heat exchanger is a member selected from the group consisting of a shell-and-tube heat exchanger and a spiral heat exchanger, wherein the upper tube sheet corresponds to an upper cover in the case of a spiral heat exchanger and the lower tube sheet corresponds to a lower cover in the case of the spiral heat exchanger.
9. (Currently amended) A method for introducing or discharging part or a whole of the second fluid through ~~the drain pipe and/or~~ the vent pipe-set forth in claim 1.
10. (Original) A method according to claim 9, wherein one of the first and second fluids is an easy polymerizable substance.
11. (Original) A method according to claim 10, wherein the other fluid is water.

12. (Previously presented) A method according to claim 10, wherein the polymerizable substance is at least one member selected from the group consisting of acrylic acid, methacrylic acid, an acrylic ester, a methacrylic ester, an aqueous acrylic acid solution and an aqueous methacrylic acid solution.
17. (Previously presented) A method according to claim 9, wherein the part of the second fluid is constantly or intermittently flowed.
18. (New) A vertical heat exchanger comprising:  
a pair of a first fluid passing ports for flowing through a tube;  
a pair of a second fluid passing ports for flowing through a shell; and  
a drain pipe at least part of one end of which being made of a lower tube sheet part and the other end of which connected outside the heat exchanger to an immediately adjacent second fluid passing port passing the same fluid as the drain pipe.
19. (New) The vertical heat exchanger according to claim 18 further comprising a vent pipe at least part of one end of which being made of an upper tube sheet part and the other end of which connected outside the heat exchanger to an immediately adjacent second fluid passing port passing the same fluid as the vent pipe
20. (New) A method for introducing or discharging part or a whole of the second fluid through the drain pipe set forth in claim 18.
21. (New) A method according to claim 20, wherein one of the first and second fluids is an easy polymerizable substance.
22. (New) A method according to claim 21, wherein the other fluid is water.
23. (New) A method according to claim 21, wherein the polymerizable substance is at least one member selected from the group consisting of acrylic acid, methacrylic acid, an acrylic ester, a methacrylic ester, an aqueous acrylic acid solution and an aqueous methacrylic acid solution.

24. (New) A method according to claim 20, wherein the part of the second fluid is constantly or intermittently flowed.

cl